UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,054	10/19/2000	Jin Pil Kim	8736.045.00	5362

30827　　7590　　04/04/2007		EXAMINER
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WASHINGTON, DC 20006	ART UNIT	PAPER NUMBER
	2623	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

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Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
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- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 December 2006</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 27th, 2006 has been entered.

Response to Arguments

2. Applicant's arguments filed December 27th, 2006 have been fully considered but they are not persuasive.

Applicant's arguments on page 7-8 have been noted. The claim language however fails to recite which of the version numbers (i.e. the current event information table or the previously transmitted event information table) the value of the second identifier is different from. Accordingly the A/65 document discloses the table_type_version_number for a current event information table (for example EIT-0 with PID of 190, after a time shift) different from the version number for the previously transmitted event information table (EIT-0 with a PID of 123 prior to the time shift). As a result, the rejection is maintained.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites the limitation "A receiver for storing information associated with a digital broadcast protocol that comprises..." While the claim preamble nominally recites a receiver, the subsequent claim limitations further limits the nature of data stored in the receiver and therefore recites specifics of a data structure. It does not appear that a claim reciting a functional descriptive material falls within any of the four categories of patentable subject matter set forth in § 101. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. See Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

Claim Objections

5. Claim 1 objected to because of the following informalities:

Applicant is requested to correct line 4 of claim 1 that recites, "digital broadcast that in different from a version number for a previously transmitted event information table" to --digital broadcast that is different from a version number for a previously transmitted event information table--. Appropriate correction is required.

6. Claim 4 objected to because of the following informalities:

Claim 4 recites the limitation "wherein the reserved field in the master guide

table is situation...". There is insufficient antecedent basis for "the master guide

table" in the claim.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

8. Claims 6-16 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claim 6 recites the limitation, "a version number for the present event information

table that is different from a version number for a previously transmitted event

information table and a second identifier, distinct from *the version* number and

having a value that is different from a value of *the version number*". Claim language

fails to distinctly point out which of the version numbers (i.e. present EIT or

previously transmitted EIT) "the version number" refers to. The claim is therefore

rendered indefinite and examined as best understood.

Claim 13 is rejected for similar reasons as claim 6.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

10. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by ATSC A/65

"Program and System Information Protocol for Terrestrial Broadcast and Cable"

(henceforth referred to as A/65), published on 23rd December 1997.

With regards to claim 1, the A/65 document discloses a receiver (decoder) for

storing information (see page 71) that comprises:

A version number for an event information table (EIT_2 updated version number

of 3 as indicated in example of page 71) transmitted in a transport stream of the

digital broadcast that is different from a version number for a previously transmitted

event information table (previous version for EIT_2 was 2, as indicated in table D1,

page 71); and

A second identifier (EIT_5 version number) distinct from the first version number

and having a value that is different from a value of the version number (version

number of EIT_5 need not be the same as the version number of EIT_2), the second

identifier comprising identification information (EIT_5 version number) indicating

whether contents of an event information table in a bit stream syntax are shifted or

changed.

With regards to claim 2, the A/65 document further discloses the method of

storing information that comprises a version number and a PID for each table,

including the EIT, defined in a program and system information protocol for digital

broadcast (see page 16-18, and figure D.3 in page 74).

With regards to claims 3, 8, and 11, the A/65 document discloses the method

of storing information that further comprises at least one reserved field

(table_type_version_number reserved for indicating version number of respective table_type), whether the contents of the EIT are shifted or changed. See pages 16-18.

With regards to claim 4, the reserved field indicating version number of the table type (table_type_version_number) is situated in a for_loop statement in the master guide table bit stream syntax. See page 16.

With regards to claims 5, 9, and 16, the A/65 illustrates an *example* of an instance of EIT-k, EIT_5 with version number 15 (see page 71). The version_number is further indicated as being 5 bits of unsigned integer, most significant bit first, (uimsbf) format. The version number of '15' therefore can be represented in uimsbf format as '01111'. As long as there is no subsequent changes made to EIT_5, the version number is maintained at '01111', thus having at least bit (MSB) of the reserved field having a value of '0'. If there is a change to EIT_5, the change is flagged by updating the version number (i.e. incremented by 1 modulo 32, see page 32). The value of EIT_5 therefore changes to '16', represented in binary uimsbf format as '10000', thereby the at least one bit (MSB) of the reserved field having a value of '1' when a change is made to the contents of EIT-5. Thus A/65 document anticipates all the limitations of claim 5.

With regards to claims 6 and 13, the A/65 document teaches the steps of, at a transmitting side broadcasting using a master guide table, comprising the steps of:

Preparing at a transmitting side, a present event information table comprising contents pertaining to a broadcast event (see page 77);

Preparing, at the transmitting side, a master guide table for the digital

broadcast protocol (see pages 15-18 and 69-70). The master guide table includes a

version number (4) for the present EIT (e.g. current EIT-0 with PID 190) after a time

shift) that is different from a version number (6) for a previously transmitted EIT

(previous EIT-0 with PID 123 before the time shift). See example illustrated in page

71. the master guide table further includes a second identifier

(table_type_version_number), distinct from the version number of the previously

transmitted EIT (in this case the previous EIT-0 that is now obsolete) , and having a

value that is different from a value of the version number of the previously

transmitted EIT, the second identifier comprising identification information which

indicates whether contents of the present event information table in a bit stream

syntax are shifted or changed (e.g. if the version number of the current EIT-0 with

PID 190, i.e. "second identifier", remains unchanged at 4 then it indicates no change,

whereas if the version number changes to 5, it indicates change to the content of

EIT-0 with PID-190).

Transmitting the master guide table and the present event information to a

receiving side (the decoder). See pages 69-71.

Receiving at the receiving side, the master guide table and the present event

information table; and parsing identification information (second identifier) and the

present event information table; and selectively updating a database having parsed

contents of the previous event information table with the parsed contents of the

present event information table in accordance with the parsed identification

information. See pages 71 and 74, "Whenever the decoder monitoring the MGT detects a change in the version number of a table, it assumes that the table has changed and needs to be reloaded".

With regards to claims 7 and 14, the decoder reloads a table only when a version number of the table is changed and merely shifts the PID list with their respective version numbers when only a time shift occurs. The A/65 document therefore teaches the step of merely shifting the PID list and not updating the database with contents of the event information table when the parsed identification information indicates that the present event information is shifted in time and further teaches the step of updating the database with parsed contents of the present event information when the parsed identification indicates that a present EIT is changed (i.e. via version change). See page 71.

With regards to claim 10, the A/65 document teaches the step of preparing at least one EIT based on the present time using event information, allocating a PID and a version number for each EIT (see page 77-78), and including the identification information (table_type_version_number) in the bit stream of the MGT (see pages 16, 71 and 74) and transmitting the MGT to the receiving party after multiplexing the MGT with the audio transport bit stream and a video transport bit stream (see page 80).

With regards to claim 12, the A/65 document discloses that the EIT contains information for events for each channel. The information includes event title, start time, program duration (i.e. end time relative to the start time), and a pointer to the

ETM that further contains the event captions and descriptions. See pages 30, and

32-33. Applicant also notes in page 3, under "Background Invention" that the EIT

has event information including title, start time, end time, and caption.

With regards to claim 15, since the version number is provided as the

identification number, the version number being represented as an unsigned integer

(see pages 31 and 71), the retrieval of the version number comprises the step of

reading the value of the unsigned integer, thereby reading the bits assigned in a field

reserved for the identification information in the MGT.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Usha Raman whose telephone number is (571) 272-

7380. The examiner can normally be reached on Mon-Fri: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The

fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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272-1000.

UR

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PRIMARY PATENT EXAMINER